

REMARKS

This paper is responsive to any paper(s) indicated above, and is responsive in any other manner indicated below.

PENDING CLAIMS

Claims 1-14 and 50-76 were pending, under consideration and subjected to examination in the Office Action. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is presently interested. At entry of this paper, Claims 57-74 and 77-80 will be pending for further consideration and examination in the application.

One or more of the changes are detailed as follows:

The superfluous word "unitarily" has been removed from each of claims 1, 11, 13, 14, 63, 68, 73 and 74.

The phrase "arranged to surround said semiconductor chip" has been removed from each of claims 1, 11, 13, 14, 63, 68, 73 and 74

SUPPLEMENTAL REISSUE OATH/DECLARATION

The reissue oath/declaration has been objected to based upon the Office Action concern(s) as set forth within the Office Action. MPEP 1444's section II indicates that Applicant is able to defer the filing of a Supplemental Reissue Oath/Declaration until the end of prosecution). Applicant is presently in the process of having the inventor(s) execute a Reissue Oath/Declaration covering all presently-

existing reissue errors and/or all papers submitted to date (including this paper), and such executed Reissue Oath/Declaration **will be submitted shortly**. That is, Applicant purposefully is having a Reissue Oath/Declaration executed subsequent to submission of this present Amendment, so that such Reissue Oath/Declaration can be comprehensive to cover amendments submitted (i.e., errors corrected) with this present Amendment, and obviate any need for another supplemental Reissue Oath/Declaration. If the Reissue Oath/Declaration becomes the only issue barring allowance of the application, the Examiner is asked to please refrain from issuing another action, and instead is invited to call the undersigned at the local Washington, D.C. telephone number of 703-312-6600 to provoke accelerated filing of such document to move the application to allowance.

REJECTION UNDER '112, 2ND PAR. OBIATED VIA CLAIM AMENDMENT

Claims 1-14 have been rejected under 35 USC '112, second paragraph, as being indefinite for the concerns listed on pages 2 and 3 of the Office Action. Care has been taken to now insure that patented claims 1-14 exist only within this Reissue application, i.e., any claim 1-14 have been removed from any related divisional Reissue applications, and accordingly, any confusion or conflict with claims 1-14 of related divisional Reissue applications has been obviated. As the foregoing is believed to have addressed all '112 second paragraph concerns, and withdrawal of the '112 second paragraph rejection are respectfully requested.

DOUBLE PATENTING REJECTION - TRAVERSED/NOT SUPPORTED

The non-statutory double patenting rejection is respectfully traversed because such rejection does not provide the factual analysis required for such rejections under U.S. patent law, i.e., the Examiner has not satisfied his/her initial burden to adequately support the rejection. More particularly, MPEP 804 providing guidance for examining states that

“Since the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 USC 103(a) rejection, the factual inquiries set forth in *Graham v. John Deere Co.*, 383 US 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 USC 103 are employed when making an obviousness-type double patenting analysis. These factual inquiries are summarized as follows:

- (A) Determine the scope and content of a patent claim and the prior art relative to a claim in the application at issue;
- (B) Determine the differences between the scope and content of the patent claim and the prior art as determined in (A) and the claim in the application at issue;
- (C) Determine the level of ordinary skill in the pertinent art; and
- (D) Evaluate any objective indicia of non-obviousness.

...

Any obviousness-type double patenting rejection should make clear:

- (A) The differences between the invention defined by the conflicting claims - a claim in the patent compared to a claim in the application; and
- (B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim in issue is an obvious variation of the invention defined in a claim in the patent.”

The rejection does not make clear the differences, or the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim in issue is an obvious variation of the invention defined in a claim in the patent.

That is, the Office Action comments have supplied only a bare conclusion, with no accompanying discussions of differences or obviousness reasons. Accordingly, Applicant respectfully submits that the above analysis should be provided in order for the Examiner to satisfy his/her initial burden to support the rejection, or the rejection should be withdrawn.

Despite the above traversal, it is respectfully submitted that such rejection has been rendered **obviated by the cancellation of allegedly double-patenting claims from the present application or the related application(s)**. The above statements, or any present cancellation of disputed claims (without prejudice or disclaimer), should not be taken as an indication or admission that the objection or rejection was valid, or as a disclaimer of any scope or subject matter, but is merely use of a procedural approach to move toward a patent as quickly as possible.

RECAPTURE REJECTION - TRAVERSED

The **recapture rejection** of Claims 50-76 as set forth within the section numbered "4" beginning on page 4 of the Office Action (and/or within prior Office Actions) is respectfully traversed.

The recapture rejection of canceled **claims 50-56** is presently **obviated** owing to **cancellation** of such claims. Such cancellation (without prejudice or disclaimer), should not be taken as an indication or admission that the objection or rejection was valid, or as a disclaimer of any scope or subject matter, but is merely lessening of a number of claims to lessen a number of issues so as to move prosecution toward allowance more quickly.

The recapture rejection of **claims 57-62 (and new dependent claims 77-80)**, is presently **obviated** owing to such claims being **amended (or written) to include the disputed recapture limitations**. Such amendment or rewriting (without prejudice or disclaimer), should not be taken as an indication or admission that the objection or rejection was valid, or as a disclaimer of any scope or subject matter,

but is merely lessening of a number of claims having alleged recapture concerns, to lessen a number of issues so as to move prosecution toward allowance more quickly. Reconsideration and allowance of such claims, are respectfully requested.

Regarding remaining **claims 63-74**, the following is submitted in rebuttal of any remaining recapture concerns. That is, Applicant continues to traverse the recapture rejections.

In the discussions to follow, it is **important to comprehend and to understand the following**. More particularly, reissue claims may be both broader and narrower than pre-amendment claims along **differing fact situations**. That is, there are **at least three (3) differing factual situations** which are possible. For present discussions, assume that any claim limitation (e.g., limitation A) may be broader (A_{broader}), broad (A_{broad}), intermediate ($A_{\text{intermediate}}$) or narrow (A_{narrow}) in scope, and next, assume that an original application's **pre-amendment claim** has the limitations of: $A_{\text{broad}}B_{\text{broad}}C_{\text{broad}}$, and that claim $A_{\text{broad}}B_{\text{narrow}}C_{\text{broad}}$ was allowed and patented as a result of narrowing and argument of limitation B.

A **first reissue factual situation** may be where an applicant subsequently attempts a reissue claim of $A_{\text{broad}}B_{\text{broad}}C_{\text{broad}}$, i.e., the applicant **attempts to revert limitation B** back to its **original pre-amendment scope**. A **second factual situation** may be where an applicant attempts $A_{\text{broad}}B_{\text{narrow}}C_{\text{broader}}$, i.e., where applicant **maintains limitation B** in its amended (patented) scope, and **attempts to broaden out limitation C** (which was not previously amended). And a **third situation** (like Applicant's present application) may be where an applicant attempts

$A_{\text{broad}} B_{\text{intermediate}} C_{\text{broad}}$, where limitation B is **broad**er than the patented B_{narrow} limitation, **but narrower** than the pre-amendment B_{broad} limitation.

Continuing discussions, page 4 of the May 14, 2009, Office Action cites **four (4) legal cases** (*Pannu*; *Hester*; *In re Clement*; *Ball Corp.*) in apparent support of the recapture rejection. Of those four cases, it is respectfully submitted that the ***Clement*** legal case is relevant **only in that it provides a framework for analyzing whether broadened reissue claims impermissibly attempt to recapture subject matter that was surrendered during original prosecution.** More particularly, *Clement*'s panel recognized that reissue claims may be both broader and narrower than pre-amendment claims in different aspects (as was discussed above), and as a result of such recognition, the *Clement* panel **offered a tripartite (or three-pronged) framework for recapture-rule analysis** as follows:

- (1) if the reissue claim is as broad as or broader than the canceled or amended claim in all aspects, the recapture rule bars the claim;
- (2) if it is narrower [than the canceled or amended claim] in all aspects, the recapture rule does not apply ... ;
- (3) if the reissue claim is broader [than the canceled or amended claim] in some aspects, but narrower in others, then:
 - (a) if the reissue claim is as broad as or broader [than the canceled or amended claim] in an aspect germane to a prior art rejection, but narrower in another aspect completely unrelated to the rejection, the recapture rule bars the claim; [or]
 - (b) if the reissue claim is narrower [than the canceled or amended claim] in an aspect germane to [a] prior art rejection, and

broader in an aspect unrelated to the rejection, the recapture rule does not bar the claim

Beyond providing the above-mentioned general framework, it is respectfully submitted that the **factual situation in *Clement* is different from the factual situation in Applicant's present reissue application**, and thus, it is respectfully submitted that the **fact situation in *Clement* is not relevant to analysis of the present application**. More particularly, the facts of *Clement* deal only with the situation in which a reissue applicant has attempted to completely remove (i.e., revert) a claim feature that was added and argued to overcome a prior art rejection during prosecution. By completely removing the added feature, *Clement* effectively is attempting to broaden the reissue claim to its pre-amendment scope with respect to that feature, i.e., *Clement* is attempting the first situation mentioned above, where an applicant subsequently attempts a reissue claim of $A_{\text{broad}}B_{\text{broad}}C_{\text{broad}}$, to **revert limitation B back to its original pre-amendment scope**.

Such situation would fall squarely within either prong 1 or prong 3(a) of the *Clement* framework. **In contrast to *Clement***, Applicant's present Reissue Application is directed to the differing third situation mentioned above, i.e., where an applicant attempts $A_{\text{broad}}B_{\text{intermediate}}C_{\text{broad}}$, where limitation B is broader than the patented B_{narrow} limitation, but narrower than the pre-amendment B_{broad} limitation.

Next, the fact situations of the **Hester** legal case and the **Pannu** legal case (cited on page 4 of the Office Action) are likewise not relevant for the same reason that *Clement* is not relevant. That is, **Hester** and **Pannu** also attempted the first situation mentioned above, where an applicant subsequently attempts a reissue

claim of $A_{\text{broad}}B_{\text{broad}}C_{\text{broad}}$, **to revert limitation B back to its original pre-amendment scope.**

Finally, the fact situation in **Ball Corp.** (cited on page 4 of the Office Action) also is not factually relevant, in that **Ball Corp.** attempted the second situation mentioned above, where an applicant subsequently attempts a reissue claim of $A_{\text{broad}}B_{\text{narrow}}C_{\text{broader}}$, which maintains limitation B in its amended scope, and attempts to broaden out limitation C (which was not previously amended). The **Clement** case recognized and discussed such **Ball Corp.** situation within its own **Clement** opinion. More particularly, in assessing the facts of **Ball Corp.**, the **Clement** court found that Ball had amended a claim feature to overcome prior art (reciting "a plurality of feedlines" where the original claim only required "at least one conductive lead"). Ball's reissue claims **preserved the feature that was narrowed to avoid prior art,** and instead removed a claim feature pertaining to shape that was neither added nor argued to overcome a prior art rejection. As such, the **Clement** panel characterized Ball as falling under recapture prong 3(b).

In contrast to Ball Corp., as mentioned above, Applicant's present Reissue Application is directed to the differing third situation where an applicant attempts $A_{\text{broad}}B_{\text{intermediate}}C_{\text{broad}}$, where limitation B is broader than the patented B_{narrow} limitation, but narrower than the pre-amendment B_{broad} limitation. In short, **the Ball Corp.'s fact pattern is irrelevant to the fact pattern of Applicant's present Reissue application** (just like **Clement's**, **Hester's** and **Pannu's** fact patterns are irrelevant).

Accordingly, **it is respectfully submitted that the factual situations of the four (4) legal cases cited on page 4 of the May 14, 2009, Office Action are not**

relevant for treatment of Applicant's present reissue application. That is, Applicant seeks to broaden a reissue claim with respect to a feature that was added and argued during prosecution, **but in fact seeks to broaden to an intermediate extent with respect to the pre-amendment claim.** That is, Applicant seeks a claim **of some intermediate scope between the pre-amendment claim and the patented claim.**

No Federal Circuit decision squarely addresses such factual situation like Applicant's reissue application, where a claim feature narrowed to avoid prior art is sought to be **broadened to an intermediate scope** in a reissue application. **However, an expanded USPTO Board panel has rendered a PRECEDENTIAL decision (WHICH MUST BE FOLLOWED) squarely on point for intermediate reissue claim situations,** i.e., **Ex parte Eggert**, 67 U.S.P.Q.2d (BNA) 1716, 67 U.S.P.Q.2d (BNA) 1716 decided 29 May 2003.

Absent a clear statement on the matter from the Federal Circuit or the Supreme Court, **the on-point Eggert precedential decision of the PTO's expanded Board of Patent Appeals and Interferences is BINDING on panels of the Board (and thus, by extension, to PTO examiners, Supervisory Primary Examiners (SPEs) and Special Programs Examiners (SPREs)), and SHOULD BE FOLLOWED by PTO examiners, SPEs and SPREs** (whose decisions are reviewable by the Board).

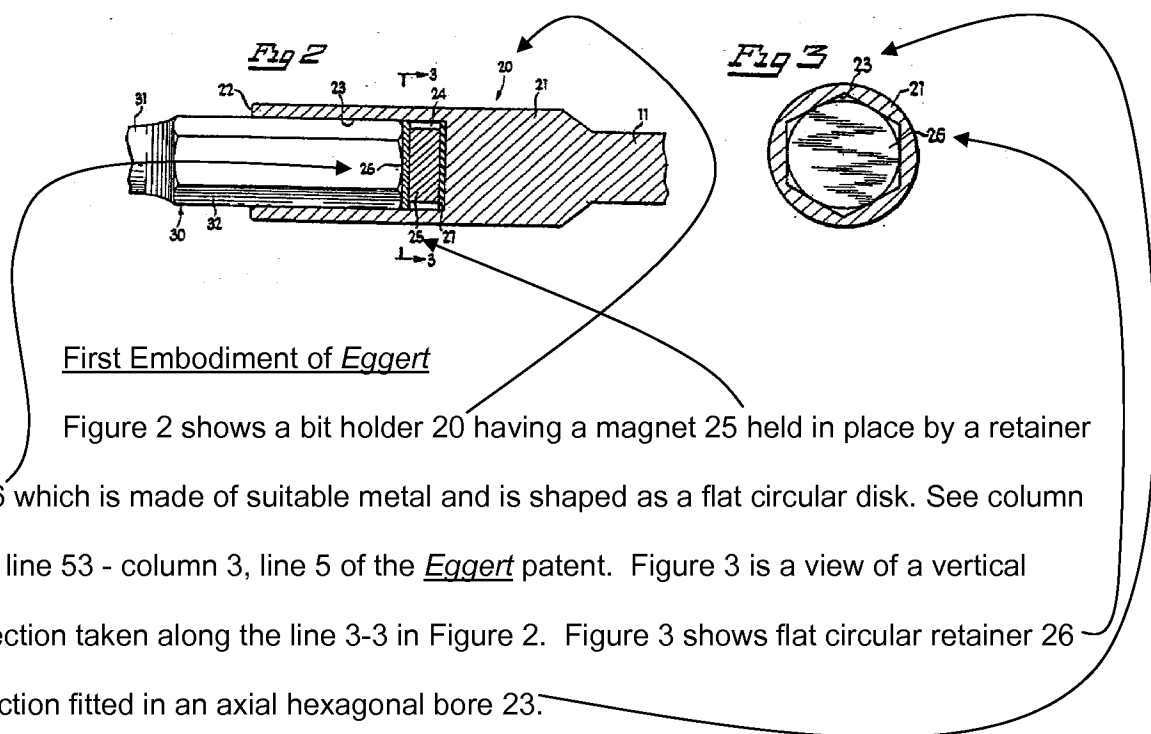
Accordingly, Applicant's continued traversal of the recapture rejections proceeds as follows.

Ex parte Eggert discussion:

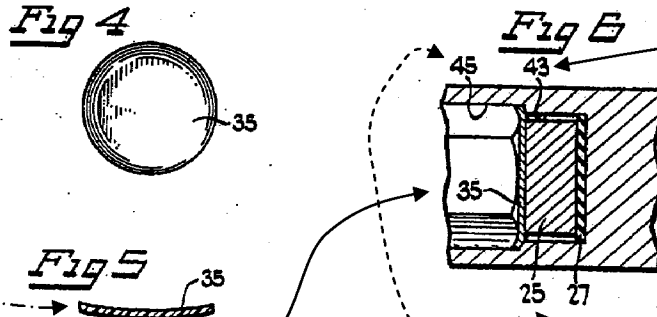
More particularly, the precedential USPTO Board opinion of Eggert, was decided 29 May 2003, concerning US Patent No. 5,577,426. Eggert involved a factual situation where a claim feature narrowed to avoid prior art was sought to be **broadened to an intermediate scope** in a reissue application. In such case, the Board **REVERSED** the Examiner's attempt to apply recapture to reject the application. Background teaching of the Eggert opinion is useful and relevant for understanding of traversal/rebuttal of the present rejection in Applicant's application.

The invention in Eggert was related to a magnetic bit holder. Two embodiments were at issue in Eggert's appeal; such two embodiments are briefly described as follows.

The **first embodiment** is shown in Eggert's FIGS. 2 and 3 as follows:



The **second embodiment** is shown in Eggert's FIGS. 4, 5 and 6 as follows:



Second Embodiment of Eggert

In the second embodiment, an alternative bit holder is shown which is similar to bit holder 20 in the first embodiment, except the nature of the bore and retainer are different. More specifically, the bit holder of Figure 6 has a cylindrical body which has a circularly cylindrical axial bore 43 in addition to a hexagonal bore 45. See column 3, lines 48-55.

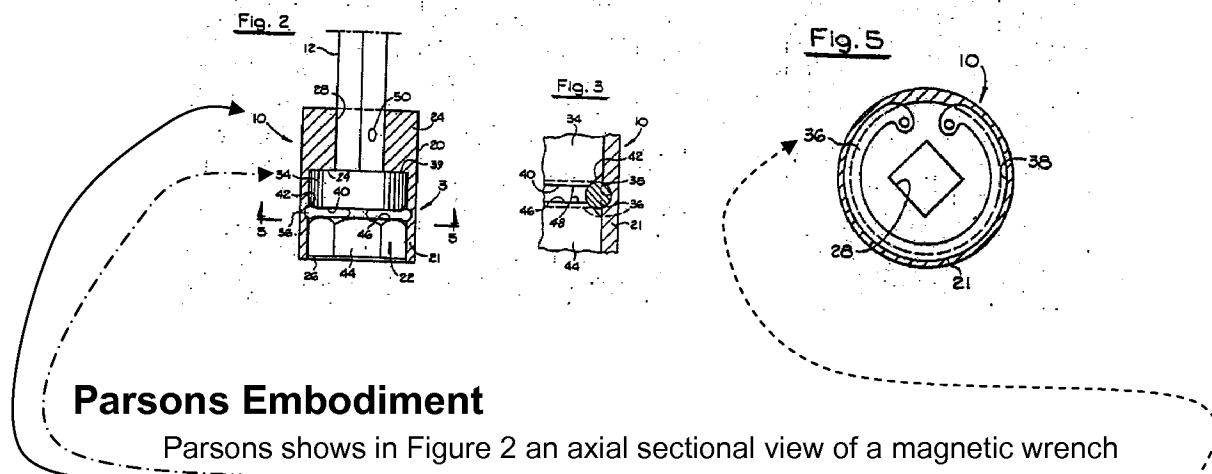
Figure 6 shows that magnet 25 is dimensioned to fit freely in the cylindrical bore 43 and is held in place by a retainer 35 friction fitted in the hexagonal bore 45.

See column 3, lines 59-64. Figures 4-6 show that the retainer 35 is formed of suitable plastic material and generally bowl-shaped and convex toward the magnet.

See column 3, lines 35-47.

Eggert's original independent claim 1 recited the language "retaining structure in contact with the outer surface of said magnet and interference fitted in said bore to retain said magnet in said bore." Original claim 1's limitations, thus, encompassed Eggert's both first and second embodiments.

In a rejection, the Eggert Examiner applied Parsons, US Patent No. 4,663,998 (shown as follows), for a teaching of the broadly claimed retaining structure.



Parsons Embodiment

Parsons shows in Figure 2 an axial sectional view of a magnetic wrench socket 10. Figure 2 shows magnet 34 held in a cylindrical bore using of a C ring 36.

See column 1, lines 35-65, of Parsons. Figure 3 of Parsons is a large scale sectional view of a portion of Figure 2 indicated by arrow 3. Figure 3 shows the C ring 36 releasably held in a peripheral groove 38 formed in the wall 21. See column I, lines 29 and 30, and lines 60-65. Figure 5 of Parsons shows a sectional view taken at line 5-5 of Figure 2 and shows C ring 36 releasably held in peripheral groove 38 formed in the wall 21. See column 1, lines 34 and 35, and lines 60-65. Thus, Parsons describes what in essence is a third (cited prior art) embodiment covered by the language of Eggert's original claim 1.

In response to the Examiner's rejections applying Parsons to the claimed retaining structure, Eggert's applicant eventually rewrote non-art-rejected dependent claim 6 into independent form. Claim 6 added the limitation of "said retaining

member being generally bowl-shaped and convex toward said magnet” to claim 1.

This claim language corresponds only to the second embodiment disclosed in Figures 4, 5 and 6. That is, note that such non-generic language **excluded** Eggert’s disclosed first embodiment which is a flat, circular metal disk 6. The Examiner entered the amendment and appeared to allow the application on a basis of such “bowl-shaped and convex” feature/limitations, and the Eggert patent issued.

Attached herewith is an **appendix sheet** titled “Eggert Analysis”. A right-hand column of such “Eggert Analysis” sheet reiterates the issued claim 1, with gray highlighting within such claim indicating the feature/limitations which appeared to gain allowance. Again, remember that such overly-narrow features/limitations did NOT cover Applicant’s first (FIGS. 2-3) flat, circular metal disk 6 embodiment.

Subsequently (i.e., post-issuance), Eggert’s applicant attempted to correct the overly-narrow claim limitation by reissue. More particularly, Eggert’s applicant presented new reissue independent claims 15 and 22 which were of sufficient scope to not only cover both of their disclosed FIGS. 2-3 (flat metal disk) and FIGS. 4-6 (bowl-shaped, convex disk) embodiments, but also distinguish over the C ring of Parsons. For example, the new language of claim 15 (**shown in the center column of the attached “Eggert Analysis” sheet**) reads “a discrete retaining member friction fitted in said bore outboard of said magnet and substantially covering said outer surface of said magnet to retain said magnet in the bore.” The scope of this language included both the first and second embodiments of Eggert’s invention, and as recognized by the Eggert Examiner, was free of the prior art of record. But note from viewing the attached Eggert analysis sheet, that such claim was attempting to

delete the “bowl-shaped and convex” feature/limitations (see encircled portions) which were instrumental in gaining allowance.

Eggert’s application (like the present application), was then rejected based on the “reissue recapture rule”. Subsequently, on a first round of USPTO appeal, the Eggert Examiner asked an initial 3-person USPTO Board to impose a per se rule of reissue recapture to prevent the Eggert Appellant from retreating from any claim limitation determined to have secured allowance of the original patent. The Examiner LOST (i.e., was reversed) in the first round of appeal. After losing upon decision of a 3-person Board, the Eggert Examiner then requested and subsequently got a second round full-Board-panel reconsideration and urged the full Board to reverse the prior decision and to adopt the per se rule. The full-Board also rejected the per se rule, reversing the examiner to ultimately allow the Eggert Appellant to use reissue to retreat from the original overly limiting claim limitations to an intermediate scope in the reissue application..

More particularly, the Eggert decision may be interpreted as follows. For discussions, attention is directed again to the attached “Eggert Analysis” sheet, wherein circles or Venn diagrams may be used in explanation/analysis of recapture. Attention is directed to the Venn diagram at the top of the “Eggert Analysis” sheet. The issued claim (right-hand column of the “Eggert Analysis” sheet) has a narrowest scope as shown representatively by the smaller (inner) Venn diagram circle. In contrast, the surrendered pre-amendment claim (left-hand column of the “Eggert Analysis” sheet) not having the allowable features/limitations (of the issued claim), has the broadest scope as shown representatively by the larger (outer) Venn diagram circle. The Eggert decision states that the grayed Venn diagram area

(between the broadest pre-amendment scope and narrowest patented scope)

represents **intermediate** claim features/limitations/scope which have **NOT YET**

BEEN CONSIDERED BY THE EXAMINER DURING PROSECUTION, AND

BECAUSE IT HAS NOT BEEN CONSIDERED, IT HAS NOT BEEN

SURRENDERED BY APPLICANT. That is, since it has **not been**

considered/surrendered, a reissue Applicant can (according to the precedential

Eggert decision) freely claim within this grayed (intermediate) area **WITHOUT**

VIOLATING RECAPTURE.

Note with respect to reissue claim 15 (center column) on the “*Eggert* Analysis” sheet, that the full Board reversed the examiner’s recapture rejection concerning the disputed limitations (see circled portion of the center and right columns of “*Eggert* Analysis” sheet), and allowed *Eggert*’s reissue applicant to actually back away (i.e., **broaden to an intermediate scope**) from the amendment features/limitations which gained the allowance of the original issued claim. The important teaching to comprehend is that, as long as a reissue claim is of **intermediate scope** (grayed Venn diagram area) between the surrendered claim and issued claim, then the reissue claim **DOES NOT VIOLATE THE RECAPTURE RULE.** (As will be seen ahead, Applicant’s reissue claims are likewise of intermediate scope between the surrendered and issued claims.)

The effect of the *Eggert* decision was that *Eggert*’s Appellant was **not limited** to the “retaining member being generally **bowl-shaped and convex** toward said magnet” limitations of the patented claims. Instead, *Eggert*’s applicant **was able to obtain intermediate new reissue independent claims** 15 and 22 which recited, for

example, “a discrete retaining member friction fitted in said bore outboard of said magnet and substantially covering said outer surface of said magnet to retain said magnet in the bore.” The scope of this language included both of Eggert's FIGs. 1-2 and FIGs. 4-6 embodiments.

Thus, to summarize the precedential Eggert decision (i.e., the only precedential “intermediate scope” decision available), Reissue applicants are NOT frozen at the scope of patented (amendment) claims, but instead, Reissue may be used to pursue intermediate scope claims to supplement and/or broaden erroneous (e.g., overly restrictive) claims. This Board finding makes sense in that, if a *per se* reissue recapture rule were always applied/applicable, then in a situation where any claim having a single (i.e., only one) limitation and that single limitation was amended and argued to allowance during original prosecution, then a correction via Reissue would be unavailable for correcting an overly narrowed claim. In contrast, with the Eggert ability to amend a patented claim to an intermediate claim, then Reissue would be available for correcting such an overly narrowed claim.

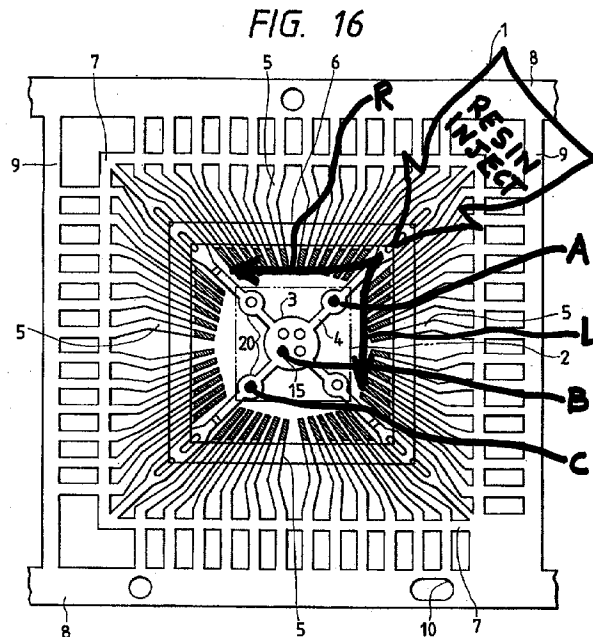
To conclude this section of argument, Applicant respectfully submits that **unless there is another precedential decision** which supercedes the holding in Eggert, Eggert's full-panel Board decision holding that reissue claims of intermediate scope do NOT VIOLATE RECAPTURE SHOULD BE FOLLOWED by PTO examiners, SPEs and SPREs (whose decisions are reviewable by the Board) in the examination of the present application.

Claims 73 and 74:

Discussion turns now to the present application at hand. Claim 73 will be used as an example and will be logically be discussed to preclude application of any “*per se* reissue recapture rule” with respect to such claims. Regarding background, from a historical perspective, in reviewing the independent claims during reissue review for the present application, it has been determined that the patented claim limitations of (e.g., see claim 1) “said semiconductor chip is fixed to a part of each of said suspension leads by adhesive which is located under a peripheral portion of said semiconductor chip”, are **unnecessarily restrictive in scope**, and thus are an “error”.

More particularly, during prosecution of the parent patent, it was argued that the advantage of the foregoing was that “adhesion of the semiconductor chip to the leadframe can be sufficiently provided so as to prevent a shifting of the semiconductor chip during manufacturing.” However, it has subsequently been realized (since original prosecution) that it is NOT absolutely necessary to fix (e.g., adhere) a semiconductor chip to **each suspension lead (i.e., all suspension leads)** in order to prevent shifting.

More particularly, all that may be required is that the semiconductor chip be minimally fixed at **two shift-preventing positions separated from each other** to prevent shifting during manufacturing (e.g., resin encapsulation). A modified version of Applicant’s FIG. 16 will be used in example explanation as follows:



Applicant's FIG. 16 (w/explanatory marked modifications)

More particularly, as one example, assume that resin is injected (during a resin encapsulation operation) from a FIG. 16 die corner opposing a point A, in a general direction as shown by the large arrow above. Such injected resin may tend to flow along one of the suspension leads (note that there are 4 suspension leads in this example), and then upon arriving at a die corner opposing the point A, the injected resin may split and equally flow in right R and left L halves (see above FIG) down opposing sides of the die. Such splitting/equalized flow may cause offsetting (*i.e.*, balanced) torque pressures being applied to the die on opposing sides of the suspension lead. Since balanced torque pressures are applied, no significant torque pressures are applied to twist the die off of the lead frame carrier. In such a situation, fixing the die 2 minimally at two separated positions (*e.g.*, at darkened locations A and B (or B and C)) may very well be sufficient to prevent shifting.

A different way of explaining the overly narrowness of the “each” limitation may alternatively explained as follows. More particularly, Applicant’s example FIG. 16 lead frame (reproduced on the previous page) appears to illustrate four suspension leads. It is respectfully submitted that any person skilled in the art in looking at Applicant’s FIG. 16 example would have immediately recognized that adhering the semiconductor chip to only three (out of four) of the suspension leads, for example, would not have had any negative effect regarding the securing of the semiconductor chip. Accordingly, again, it is respectfully submitted that Applicant’s patented limitations of “said semiconductor chip is fixed to a part of each of said suspension leads by adhesive which is located under a peripheral portion of said semiconductor chip”, are **unnecessarily restrictive in scope**, and thus are an “error”.

Since it is NOT absolutely necessary to fix (e.g., adhere) a semiconductor chip to **each suspension lead (i.e., all suspension leads)** in order to prevent shifting, again, it is respectfully submitted that Applicant’s patented claims were/are **unnecessarily and overly narrow**. In an attempt to remedy such narrowness, Applicant’s independent claim 73 and 74 substantially parallel the patented independent claims 1 and 11, respectively, but retreat from the overly-restrictive “each” language. That is, as an example, recited claim 73’s chip is “fixed to said chip mounting portion by adhesive”, and is also “fixed to a part of each at least one of said suspension leads by adhesive”. Thus, note that such claim in effect recites a semiconductor chip fixed at **two (shift-preventing) positions (i.e., a “chip mounting portion” and “at least one ...suspension lead”) separated from each other** to prevent shifting during manufacturing (e.g., during the resin encapsulation

operation). (Note: As a difference from independent claim 73, independent claim 74 recites “cracking suppression means” instead of “chip mounting portion”).)

None of the references taken alone or in combination would have disclosed or suggested Applicant’s combination of features/limitations as recited in claim 73. That is, the chip is “fixed to said chip mounting portion by adhesive”, and is also “fixed to a part of **at least one** of said suspension leads by adhesive”, *i.e.*, at **two shift-preventing positions separated from each other** to prevent shifting during manufacturing (*e.g.*, during the resin encapsulation operation). Such arrangement and the fact that the adhesion locations are separated from each other is also advantageous in that it MINIMIZES an adhesion area used on a back of the chip, and thus water vapor reflow cracking is correspondingly MINIMIZED.

Turning now to recapture analysis via an Eggert-type Venn diagram analysis, attention is directed this time to the attached “Present Application Analysis” sheet, where again, circles or Venn diagrams may be used in explanation/analysis of recapture. Attention is directed to the Venn diagram at the top of the sheet. The issued claim (right-hand column of the sheet) has a narrowest scope as shown representatively by the smaller (inner) Venn diagram circle. **Gray highlighting** within such claim (shown on the lower portion, right column, of the analysis sheet) indicates the feature/limitations pointed to by the Examiner as reasons for allowance. In contrast, the surrendered claim (left-hand column of the sheet) not having the allowable features/limitations (of the issued claim), has the broadest scope as is shown representatively by the larger (outer) Venn diagram circle.

The center column includes a reiteration of present example reissue claim 73. Circled portions of the center and right columns indicate features/limitations which

are changed with respect to the issued claim and reissue claim 73. Given that the “each of” features/limitations within patented claim 1 is narrower than the “at least one of” features/limitations of reissue claim 73, and given that surrendered claim 25 (i.e., corresponding to issued claim 1) does not contain such features/limitations,

clearly the “at least one of” features/limitations are intermediate in scope.

Clearly, example claim 73 has a scope within the **grayed (intermediate) Venn diagram area.**

As explained above, the *Eggert* decision states that the **grayed (intermediate) Venn diagram area** represents claim features/limitations/scope which have **NOT YET BEEN CONSIDERED BY THE EXAMINER DURING PROSECUTION, AND BECAUSE IT HAS NOT BEEN CONSIDERED, IT HAS NOT BEEN SURRENDERED BY APPLICANT.** That is, a reissue Applicant **CAN CLAIM** within this grayed area **WITHOUT VIOLATING RECAPTURE.** Thus, it is respectfully submitted that Applicant’s example reissue claim 73 (and claim 74, and any similar claims) does not violate recapture, and thus the recapture rejection is improper and should be withdrawn.

In conclusion, it is respectfully submitted that such claim 73 and claim 74 (i.e., like the *Eggert* opinion discussed above), corrects the above-discussed overly-narrow claiming error (e.g., of independent claim 1 and 11) by amending the claim **to an intermediate scope**, while at the same time sufficiently distinguishing over the art of record.

Regarding **claim 79** (dependent from claim 73), it is respectfully submitted that such claim should be allowed in view of the fact that **such dependent claim**

explicitly incorporates the disputed recapture limitations, i.e., such claim

recites: “A semiconductor device according to claim 73, wherein **said**

semiconductor chip is fixed to a part of each of said suspension leads by adhesive.”

Similarly, regarding **claim 80** (dependent from claim 74), it is respectfully submitted that such claim should be allowed in view of the fact that **such dependent claim explicitly incorporates the disputed recapture limitations**, i.e., such claim

recites: “**A semiconductor device according to claim 74, wherein said**

semiconductor chip is fixed to a part of each of said suspension leads by adhesive.”

Claims 63-67:

Recapture rebuttal now continues with further discussions regarding **independent claim 63** (and claims 62-67 dependent therefrom). More particularly (like the above-discussed claim), clarified claim 63 also contains limitations equivalent to a situation where the rear surface of the semiconductor chip is **fixed to the first and second suspension leads by an adhesive at at least two shift-preventing positions separated from each other.** For a proper understanding of claim 63, a further discussion of patented independent claim 1 may be helpful/appropriate, and hence, such discussion is now provided herewith as follows.

More particularly, independent claim 1 recites “a leadframe having: **a chip mounting portion** for mounting said semiconductor chip; **suspension leads** formed with said chip mounting portion, a width of said chip mounting portion being wider

than a width of each of said suspension leads.” That is, note that there is **both a mounting portion** (e.g., flag) and **suspension leads**. Subsequent review of such claim related to the present reissue process revealed that such claim 1 limitations may be too narrow, and does not cover **a flag-less embodiment** of Applicant’s invention. More particularly, a potential infringer might (in a bid to avoid infringement) leave out the “chip mounting portion” or “flag” (as known in the art), and then attempt an argument that the claimed “chip mounting portion” covered “flagged” chip supporting arrangements, but did not cover “flag-less” chip supporting arrangements, i.e., **the differing embodiment or invention**. Not covering a “flag-less” arrangement is another error within the present patent, which is attempted to be corrected by the present Reissue application.

Description/understanding of “flagged” verses “flag-less” may be helpful in understanding the present situation; hence, attention is now directed to the following Applicant’s FIGS. 31-32 for a “flagged” verses “flag-less” explanation:

FIG. 31

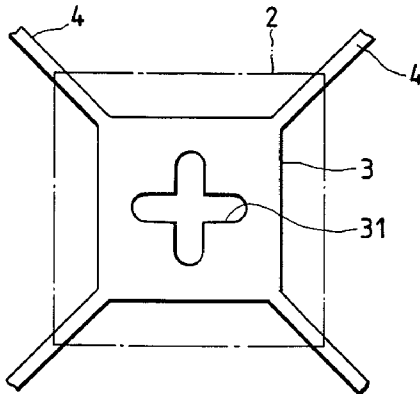
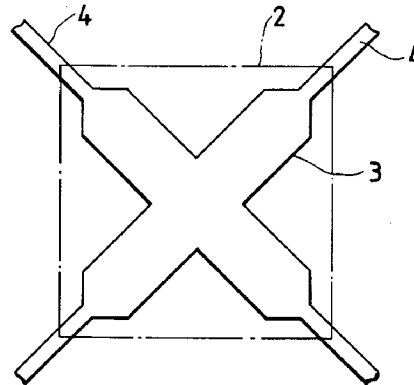


FIG. 32



Applicant's FIGS. 31 and 32

More particularly, Applicant's FIG. 31 represents a "flagged" arrangement as is understood by persons skilled in the art (*i.e.*, note that the rectangle in FIG. 31 resembles a flag; in the art, the flag may also be circular as will be shown ahead); in contrast, Applicant's FIG. 32 represents a "flag-less" arrangement (and in this example, may be said to represent a "chip mounting cross").

[continued next page]

“Flag” and “flag-less” terminology is known in the art, as **Djennas et al.’s** (U.S. Patent No. 5,327,008; of record) illustrates/describes a plurality of differing die-supporting arrangements, including rectangular mini-flag, circular mini-flag AND flag-less arrangements. Djennas et al.’s column 6, lines 14-21, describes that Djennas et al.’s “FIG. 4 illustrates, in a top-down plan view, portion: such a mini-flag 42. Mini-flag 42 is kept smaller in area (illustrated in phantom as line 44) to keep the total inter flag and a plastic encapsulation material (not illustrated devices.” Next, Djennas et al.’s column 6, lines 45-48, reproduced “...FIG. 6 portions of a lead frame 50 (only include a round mini-flag 52 to support a large die (illustrated in phantom as line 54).”

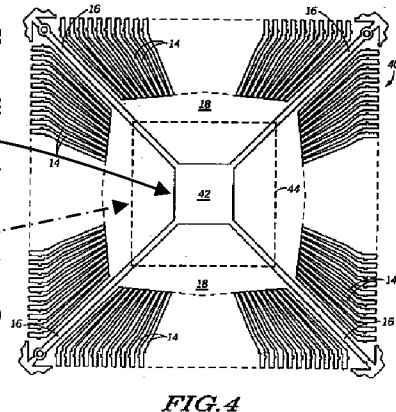


FIG. 4

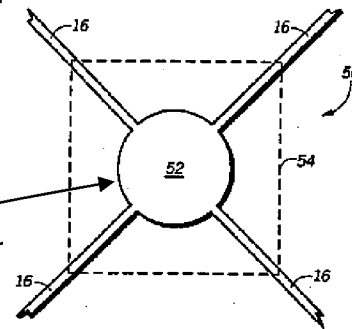


FIG. 6

rests on tie bars 16.”

Most importantly, and most relevant to the present situation, Djennas et al.’s column 4, lines 35-37, describes that Djennas et al.’s [reproduced herewith] device is a “flag-less” arrangement somewhat similar to Applicant’s (reproduced ahead).

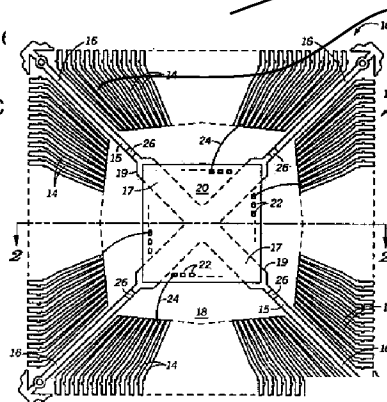
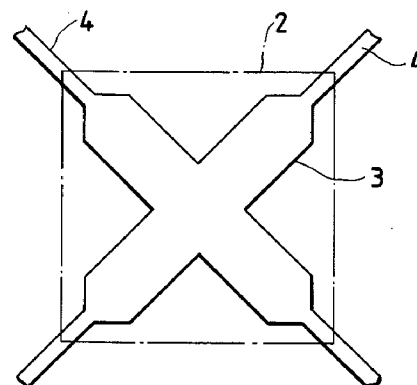


FIG. 1

FIG. 32

Accordingly, with the above understanding of Applicant’s present independent claim 63 (and claim directed toward claiming a differing embodiment



semiconductor device **utilizing a “flag-less” arrangement**. In terms of claim features/limitations of interest, independent claim 63 claims: “a lead frame including: a first suspension lead (4) for supporting said semiconductor chip, extending in a first direction; a second suspension lead (4) for supporting said semiconductor chip, extending in a second direction which is different from said first direction, said second suspension lead intersecting said first suspension lead; and ...wherein said semiconductor chip is disposed on and supported by **a flag-less said intersecting portion of said first and second suspension leads**, with said first and second suspension leads being formed with one another, wherein a width of each of said first and second suspension leads supporting said semiconductor chip at the vicinity of said intersecting portion is wider than that of each said first and second suspension leads at vicinities beyond said semiconductor chip, and widened portions of said first and second suspension leads are smaller than said semiconductor chip.”

Further, independent claim 63 also has the adhesion features/limitations discussed above with respect to other ones of Applicant's claims, *i.e.*, “wherein said rear surface of said semiconductor chip is fixed to said first and second suspension leads by an adhesive at at least two shift-preventing positions separated from each other”, and “wherein said rear surface of said semiconductor chip is fixed to said intersecting portion by an adhesive”. Given that the “intersecting portion” is formed by an intersection of **all (i.e., both) the suspension leads**, it is respectfully submitted that Applicant's claimed arrangement having a “rear surface of said semiconductor chip is fixed to said intersecting portion by an adhesive”, actually is

connected to **all the suspension leads**, and thus, **actually includes the disputed recapture limitations**.

To conclude, claim 63 (and claims dependent therefrom) corrects the above-discussed overly-narrow claiming error (e.g., of independent claim 1), while at the same time sufficiently distinguishing over the art of record. That is, none of the references taken alone or in combination would have disclosed or suggested Applicant's combination of features/limitations as recited in claim 63 (or claims 64-67 dependent therefrom). For example, while Djennas *et al.*'s FIG. 1 discloses a "flag-less" arrangement, such FIG. teaches away from

Applicant's claim 63 features/limitations of: "wherein a width of each of said first and second suspension leads supporting said semiconductor chip at the vicinity of said intersecting portion is **wider** than that of each said first and second suspension leads **at vicinities beyond said semiconductor chip**." That

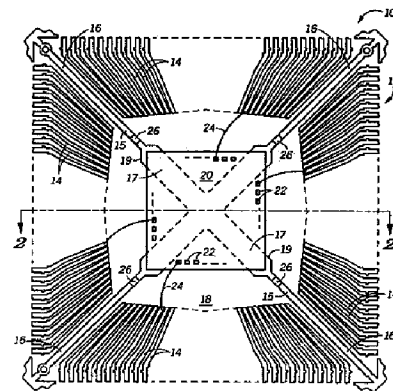


FIG. 1

is, it is noted that Djennas *et al.*'s FIG. 1 arrangement has "wide" portions that extend **beyond** the Djennas *et al.* chip. [Further, it is respectfully noted that Djennas *et al.* is removable as prior art given that it has an effective filing date of 22 March 1993, whereas Applicant's foreign priority application has a filing date of 27 March 1992.]

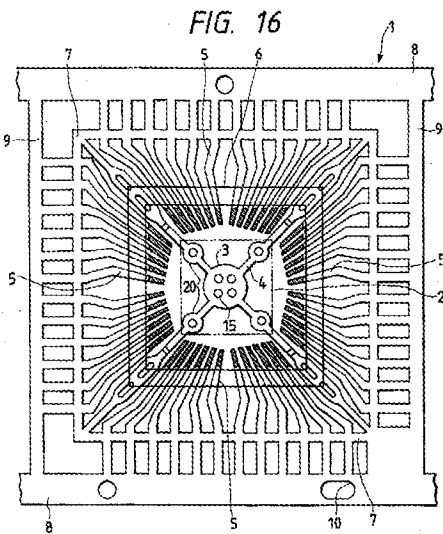
In concluding this section of arguments, it is respectfully noted that the Office Action recognizes/admits that claims 63-67 distinguish over the art of record, given that no 102/103 rejections are applied within the Office Action against such claims. In conclusion, it is respectfully submitted that such claims 63-67 correct the above-discussed overly-narrow claiming error (e.g., of independent claim 1) by claiming a

differing flag-less embodiment, while at the same time actually including the disputed recapture limitations and also sufficiently distinguishing over the art of record (*i.e.*, like in the Eggert opinion discussed above).

Regarding **claim 77** (dependent from claim 63), it is respectfully submitted that such claim should be allowed in view of the fact that **such dependent claim explicitly incorporates the disputed recapture limitations**, *i.e.*, such claim recites: "**A semiconductor device according to claim 63, wherein said rear part of said semiconductor chip is fixed to a part of each of said suspension leads by adhesive.**"

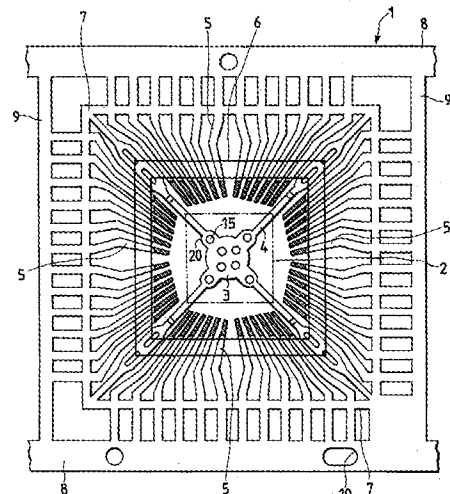
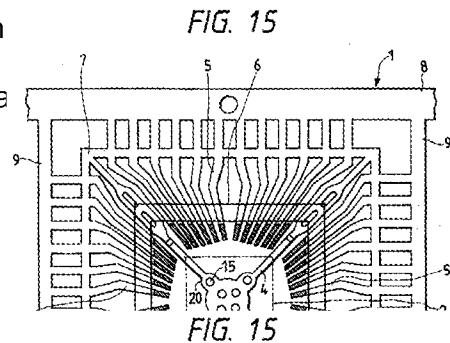
Claims 68-72:

Recapture rebuttal continues with discussion regarding **independent claim 68** (and claims 69-72 dependent therefrom). Review revealed that patented claim 2's limitations may be too narrow, in containing features/limitations: wherein each of said suspension leads includes a first portion (thin/diagonal lead) and a second portion 20 which is wider than said first portion, where 20) is separated from said chip mounting portion 3 peripheral portion of said semiconductor chip 2, and chip 2 is fixed at said second portion 20 of each of claim 2 may be overly limiting with respect to the "s" limitations, as such claim may not cover Applicant's second portions 20 not "separated from" the chip or cover a potentially infringing arrangement having a **LESS THAN "each of said suspension leads"**. Accordingly, the "separated from"



and "each" limitations are overly-limiting errors with attempted to be corrected by the present Reissue a

Added independent claim 68 avoids such overly-narrow limitations by instead reciting: wherein said chip mounting portion 3 (Applicant's FIG. 15) has a first portion extending in a first direction (upper left node 20 to lower right node) and a second portion extending in a second direction (lower left node 20 to upper right node)



which is a different direction from said first direction, said second portion intersecting said first portion, wherein a **width of each of said first and second portions (nodes 20) of said chip mounting portion is wider** than that of each of said plurality of suspension leads, ...wherein an intersecting portion of said first and second portions of said chip mounting portion is located at a substantially central portion of said rear surface of said semiconductor chip, wherein said both ends of each of said first and second portions of said chip mounting portion are located toward the peripheral portions of said rear surface of said semiconductor chip.

Further, such claim contains the limitations “wherein said rear surface of said semiconductor chip **is fixed** to said chip mounting portion by an adhesive **at at least two shift-preventing positions separated from each other**””, similar to those discussed previously with respect to other groups of Applicant’s reissue claims.

Regarding rebuttal of the recapture rejection, it is respectfully submitted that such claim 68 (*i.e.*, like the Eggert opinion discussed above), corrects the above-discussed overly-narrow claiming error (e.g., of independent claim 2) by amending the claim **to an intermediate scope** (just like claim 73), while at the same time sufficiently distinguishing over the art of record. Accordingly, the recapture rejection regarding independent claim 68 (and claims dependent therefrom) is traversed for the same reasons set forth above with respect to independent claim 73.

To conclude, claim 68 (and claims dependent therefrom) corrects the above-discussed overly-narrow claiming error (e.g., of independent claim 2), while at the same time amending to an intermediate scope and sufficiently distinguishing over the art of record. That is, none of the references taken alone or in combination would have disclosed or suggested Applicant’s combination of features/limitations as

recited in claim 68 (or claims 69-72 dependent therefrom). It is respectfully submitted that the Office Action recognizes/admits that claims 68-72 distinguish over the art of record, given that no 102/103 rejections are applied within the Office Action against such claims.

Regarding **claim 78** (dependent from claim 68), it is respectfully submitted that such claim should be allowed in view of the fact that **such dependent claim explicitly incorporates the disputed recapture limitations**, i.e., such claim recites: "**A semiconductor device according to claim 68, wherein said rear part of said semiconductor chip is fixed to a part of each of said suspension leads by adhesive.**"

EXAMINER INVITED TO TELEPHONE

The Examiner is herein invited to telephone the undersigned attorneys at the local Washington, D.C. area telephone number of 703/312-6600 for discussing any Examiner's Amendments or other suggested actions for accelerating prosecution and moving the present application to allowance.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer. That is, any above statements, or any present amendment or cancellation of claims (all made without prejudice or disclaimer), should not be taken as an indication or admission that any objection/rejection was valid, or as a disclaimer of any scope or subject matter.

Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, i.e., Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the application is now in condition for allowance.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR '1.136. Authorization is herein given to charge any shortage in the fees, including extension of time fees and excess claim fees, to Deposit Account No. 01-2135 (Case No. 1374.32049R00) and please credit any excess fees to such deposit account.

Respectfully submitted,

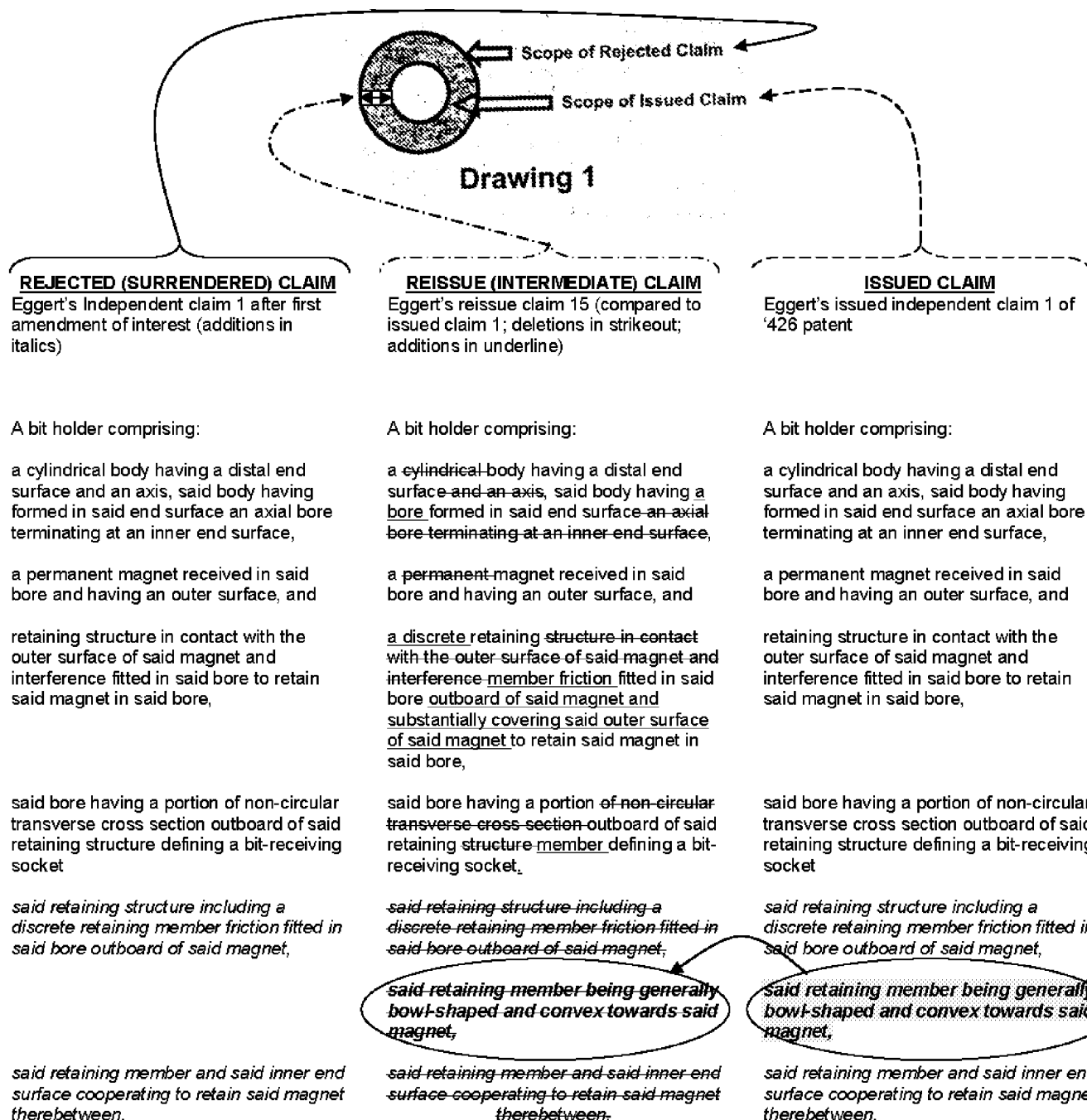
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/Paul J. Skwierawski/
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PJS/slk
(703) 312-6600

Attachment(s):
replacement Reissue Oath/Declaration

EGGERT ANALYSIS



KEY:
Reasons for allowance

Alleged recapture areas

PRESENT APPLICATION ANALYSIS

